

FIG. 1a

<i>M. bovis</i>	-----ATA-----	TGTTCTTGAAAACGAAATAGTAATAATT-----	142
<i>M. primigenium</i>	-----TT-----	TGTTCTTGAAAACGAAATAGTAATAATT-----	181
<i>M. farciformis</i>	-----ATT-----	TGTTCTTGAAAACGAAATAGTAATAATT-----	177
<i>M. avium ssp. avium</i>	-----TT-----	TGTTCTTGAAAACGAAATAGTAATAATT-----	159
<i>M. avium ssp. paratuberculosis</i>	-----AT-----	TGTTCTTGAAAACGAAATAGTAATAATT-----	196
<i>M. avium ssp.</i>	-----AAI-----	TGTTCTTGAAAACGAAATAGTAATAATT-----	100
<i>M. avium ssp. avium</i>	TAATAAATGTTT-----	AATATATTCTTGAAAACGAAATAGCCAAA-----TA-----	176
<i>M. pulmonis</i>	-----AACAAATA-----	GTTCTTAAACGAAATAGCATA-----TAAAT-----	159
<i>M. hyorhinis</i>	-----ATA-----	GTTCTTGAAAACGAAATAGCCAAA-----TAA-----	112
<i>M. avium ssp. avium</i>	-----TT-----	TGTTCTTGAAAACGAAATAGATA-----T-----	115
<i>M. faecalis</i>	-----TT-----	TGTTCTTGAAAACGAAATA-----T-----	123
<i>M. oralis</i>	-----TT-----	TGTTCTTGAAAACGAAAT-----T-----	108
<i>M. tuberculosis</i>	-----TT-----	TGTTCTTGAAAACGAAAT-----T-----	119
<i>M. scrofulaceum</i>	-----TT-----	TGTTCTTGAAAACGAAAT-----T-----	115
<i>M. falconia</i>	-----TT-----	TGTTCTTGAAAACGAAATA-----T-----	92
<i>M. leprae</i>	-----TT-----	GTTCTTGAAAACGAAATA-----T-----	07
<i>M. argentinus</i>	-----TT-----	TGTTCTTGAAAACGAAATA-----T-----	93
<i>M. orfeensis</i>	-----TT-----	TGTTCTTGAAAACGAAATA-----T-----	96
<i>M. canettii</i>	-----TT-----	GTAGTTCTGAAAG-----AATGTTTGTAAACAGTTCTTGAAAACGAAATAGAGA-----	160
<i>M. posadasi</i>	-----TT-----	CCAGTTCTGAAAG-----AACATTTCGGC-----TTCTTGAAAACGAAAGAGACA-----	190
<i>M. pinnata</i>	-----TT-----	TAAATTTTTAAAGTAGTAGAGATGG-----TTCTTGAAAACGAAATACAGCA-----	213
<i>M. parvum</i>	TT-----	CTTGAAAACGAAATATTGTA-----	100
<i>M. ulcerans</i>	TT-----	CTTGAAAACGAAATATTATAAA-----	184
<i>M. uribei</i>	TTAATTTATG-----GATGATGAA-----TGTTTGAAAACGAAATAAI-----T-----	199	

FIG. 1b

<i>B. arthritidis</i>	AAA	CATGCGATCCAGCTTTGAGAGCTTACCTTCCTCTCTTTGAAAC	108
<i>B. taeniurus</i>	AAA	CATGCGATCCAGCTTTGAGAGCTTACCTTCCTCTCTTTGAAAC	88
<i>B. falconis</i>	TAA	ATTTGGATCCAGCTTTGAGAGCTTACCTTCCTCTCTTTGAAAC	85
<i>B. boschmai</i>	AAAAAA	ATTTGGATCCAGCTTTGAGAGCTTACCTTCCTCTCTTTGAAAC	80
<i>B. argentinus</i>	AAA	ATTTGGATCCAGCTTTGAGAGCTTACCTTCCTCTCTTTGAAAC	88
<i>B. cloacalis</i>	GAATT	ATTTGGATCCAGCTTTGAGAGCTTACCTTCCTCTCTTTGAAAC	88
<i>B. hyosymoviae</i>	CA	ATTTGGATCCAGCTTTGAGAGCTTACCTTCCTCTCTTTGAAAC	113
<i>B. urata</i>	CAA	ATTTGGATCCAGCTTTGAGAGCTTACCTTCCTCTCTTTGAAAC	102
***** * ***** * ***** * *****			
<i>B. arthritidis</i>	--TTA	TTAAGATCAAACCTATAAGAATACAA	173
<i>B. taeniurus</i>	--TTA	TTAAGATCAAACCTATAAGAATACAA	153
<i>B. falconis</i>	ATTA	TTAATTAATATTTCAAA	150
<i>B. boschmai</i>	--TA	TTAATTAATATTTCAAA	141
<i>B. argentinus</i>	ATTA	TTAATTAATATTTCAAA	153
<i>B. cloacalis</i>	--TCA	TTAATTAATATTTCAAA	154
<i>B. hyosymoviae</i>	A--TTA	TTAATTAATATTTCAAA	178
<i>B. urata</i>	--TTA	TTAATTAATATTTCAAA	166
***** * ***** * ***** * *****			

FIG. 1c

<i>M. bovis</i>	TTATTAATAGCTCAAAAGCTA	ATATCTAGTTTCAGAGACA	TTTCCTCAT 144
<i>M. primatum</i>	TT---TATAGCTGCGAGCTT	ATATCTAGTTTCAGAGACA	TTCTCTCTT 148
<i>M. fermentans</i>	TATGGGTCTAAAGCTT	ATATCTAGTTTCAGAGACA	TATTTTCTCTCAT 146
<i>M. opaliscens</i>	T-----ATGTTCTACAAAGCT	ATATCTAGTTTCAGAGACA	TTCTCTCTT 129
<i>M. smegmatisophilum</i>	TT---TATGGGTCTAAAGCTT	ATATCTAGTTTCAGAGACA	TCTCTCTATA 156
<i>M. synoviae</i>	GCTTTTTTGCGCTGGCTAT	ATATCTAGTTTCAGAGACA	CCTCTTAAAG 141
* * * * * * * * * * * * * * *			
<i>M. bovis</i>	ATGTTCTTGAAGACTGAAATACTAA	ATATTTTTCATATTTACAGGACATGAAA	201
<i>M. primatum</i>	-TGTCTCTTAAAGACTGAAATACTAA	ATATTTTTCATATTTACAGGACATGAAA	207
<i>M. fermentans</i>	TGTTCTCTTAAAGACTGAAATACTAA	ATATTTTTCATATTTACAGGACATGAAA	203
<i>M. opaliscens</i>	-TGTCTCTTAAAGACTGAAATACTAA	ATATTTTTCATATTTACAGGACATGAAA	182
<i>M. smegmatisophilum</i>	-TGTCTCTTAAAGACTGAAATACTAA	ATATTTTTCATATTTACAGGACATGAAA	219
<i>M. synoviae</i>	TGTTCTCTTAAAGACTGAAATACTAA	ATATTTTTCATATTTACAGGACATGAAA	193
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<i>M. bovis</i>	-----ATCAA-----TTAATGTTAAATTGTTTCAGT-CATGAGT-----AAGTCATATTTA-	-----AAGTCATATTTA-----	250
<i>M. primatum</i>	-----CCATC-----TTAA-----TTAATGTTAAATTGTTTCAGT-CATGAGA-----AAATCATATTTAA-	-----AAATCATATTTAA-----	251
<i>M. fermentans</i>	-----TTAAA-----TTAATGTTAAATTGTTTCAGT-CATGAGA-----AAATCATATTTAA-	-----AAATCATATTTAA-----	250
<i>M. opaliscens</i>	-----ATTAATTGATTAA-----GTCATATTGTTTCAGT-CATGAGATAAAACAAATCATAAA-	-----TAGTCATTTTAAA-----	236
<i>M. smegmatisophilum</i>	-----TAATTGAA-----TTAA-----GTCATATTGTTTCAGT-CATGAGA-----TAGTCATTTTAAA-	-----TAGTCATTTTAAA-----	270
<i>M. synoviae</i>	-----ATTAATTGATTAA-----GTCATATTGTTTCAGT-CATGAGT-----ACCGAGTT-----TAATTTAT-TGAA-	-----TAATTTAT-TGAA-----	243
* * * * * * * * * * * * * * *			
<i>M. bovis</i>	-----TATGATTCATTAATGCTT-----AAATACACATCTAAA-----ACTAACAAACAAATAGGA-----	-----ACTAACAAACAAATAGGA-----	304
<i>M. primatum</i>	-----TATGATTCATTAATGCTT-----AAATACACATCTTAA-----ACTAA-----ACGATAGGA-----	-----ACGATAGGA-----	313
<i>M. fermentans</i>	-----TATGATTCATTAATGCTT-----AAATACACATCTAAA-----AACTATAACAAATAGGA-----	-----AACTATAACAAATAGGA-----	306
<i>M. opaliscens</i>	-----TTTGTATTCATTAATGCTT-----AAATACACATCTAAA-----AACTATAACAAATAGGA-----	-----AACTATAACAAATAGGA-----	296
<i>M. smegmatisophilum</i>	-----AAATGATTCATTAATGCTT-----AAATACACATCTAAA-----ACGATGATACAAATAGGA-----	-----ACGATGATACAAATAGGA-----	290
<i>M. synoviae</i>	-----AAATGATTCATTAATGCTT-----AAATGATACA-----TCATAAC-----AAATATAACAAATAGGA-----	-----AAATATAACAAATAGGA-----	295
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FIG. 1d

FIG. 1e

FIG. 1f

FIG. 2a

<i>A. axanthus</i> f.	AGGCAATTCTTCAATTTCATGATAATTGGTTTTCGACACTT.....	89
<i>A. acris</i> f.	GGGCAATTCTTCAATTTCATGATAATTGGTTTTCGACACTT.....	110
<i>A. luteola</i> f.	TAAATTCTTCAATTTCATGATAATTGGTTTTCGACACTTAAATTCACCGAAG	109
<i>A. luteola</i> f.	TAATATTCTTCAATTTCATGATAATTGGTTTTCGACACTT.....	105
<i>A. medior</i> f.	TTGCAATTCTTCAATTTCATGATAATTGGTTTTCGACACTT.....	70

FIG. 2b

<i>A. laidlawii</i>	1	CAAGCTAACCACTATTAAATAGT	GGGGCTGTAGCTGAGTTGGTTAAGGDDGCTGCGT	153
<i>A. acutif.</i>	1	CAT-----	GGGGCTGTAGCTGAGTTGGTTAAGGDDGCTGCGT	155
<i>A. amoenus</i>	1	TAC-----TAA	GGGGCTGTAGCTGAGTTGGTTAAGGDDGCTGCGT	153
<i>A. aculeatus</i>	1	TTA-----	GGGGCTGTAGCTGAGTTGGTTAAGGDDGCTGCGT	152

<i>A. laidlawii</i>	1	TCATTAACCTTGCTTCATGGTTCAAGTC-G	TGAGGCCACCATTTATAATAATAATA	223
<i>A. acutif.</i>	1	TCATTAACCTTGCTTCATGGTTCAAGTC	TGGGGDDACAT-----	201
<i>A. amoenus</i>	1	TCATTAACCTTGCTTCATGGTTCAAGTC	TGAGGCCACCATTTATA-----	184
<i>A. aculeatus</i>	1	TCATTAACCTTGCTTCATGGTTCAAGTC	TAGGCCACCATTTATA-----	172

FIG. 2c

<i>A. feldmanni</i>	GTAATCTTCTAATTCTTGTCACTATTCAGTTTGAAACCTTAA—ACTAATT— 104
<i>A. aculeatus</i>	GCAAGGATTCTCTAA—TTTGTCACTATTCAGTTTGAAACCTTAA—TGGAGTG 115
<i>A. esentulus</i>	—AACAAATTCTCTAA—TTTGTCACTATTCAGTTTGAAACCTTAA—ACTTGTT 96
<i>A. mediterraneum</i>	—CTTGTCACTATTCAGTTTGAAACCTTAACTTCTCTAAAT 84

* * * * *

<i>A. feldmanni</i>TACGTGTTTCAAGAAGIKAAGAAGCTCTTGAAGTAGATAAA GATGCTGAA— 160
<i>A. aculeatus</i>	A—TTGGTTTCTTAAGATCAAAATAGCTCTTGAAGTAGATAAA GATGCTGAA— 172
<i>A. esentulus</i>	C—TCAG—AACATCAAAATAGCTCTTGAAGTAGATAAA GAAGCTGAAAT 153
<i>A. mediterraneum</i>	AGTAGATCTTGAAGTAGATAGCTCTGCTGAA—CAATAAT TAAKAAAAGACAA 143

FIG. 3a

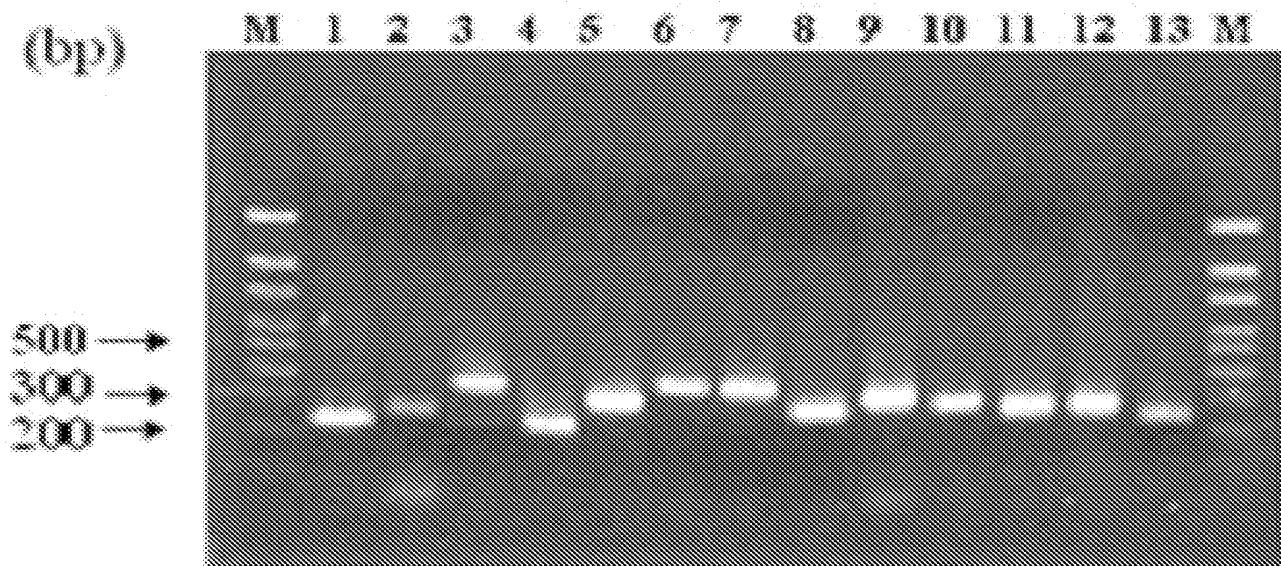


FIG. 3b

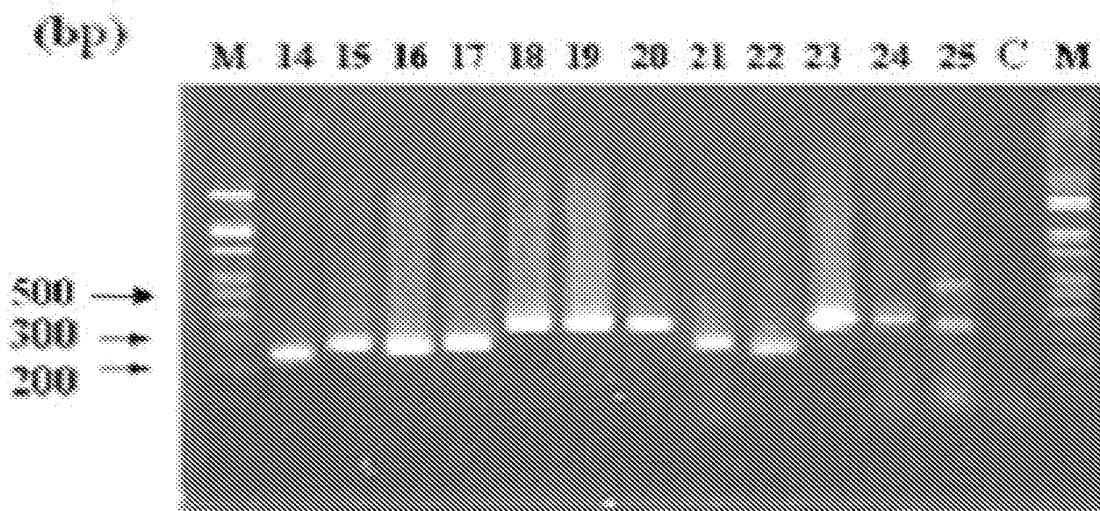


FIG. 4

MP-C [7]	<i>M. arginini</i> [28]	<i>M. arthrobidis</i> [30]	<i>M. fermentans</i> [33]	<i>M. hominis</i> [38]	<i>M. myokinensis</i> [41]
<i>M. neurolyticum</i> [49]	<i>M. opalescens</i> [52]	<i>M. orale</i> [58]	<i>M. pirum</i> [61]	<i>M. penetrans</i> [69]	<i>M. pulmonis</i> [75]
<i>M. salivarium</i> [83]	<i>M. cibacole</i> [85]	<i>M. faconis</i> [87]	<i>M. faecium</i> [30]	<i>M. hyosynoviae</i> [90]	<i>M. muris</i> [92]
<i>M. primatum</i> [96]	<i>M. spermophilum</i> [100]	<i>M. synoviae</i> [105]	<i>M. pneumoniae</i> [110]	<i>M. genitalium</i> [114]	<i>M. bovis</i> [120]
<i>M. urealyticum</i> [122]			AP-C [22]	<i>A. laidlawii</i> [128]	MP-C [7]

*[L] corresponds to SEQ ID No's of Tables 2 and 3.

FIG. 5a

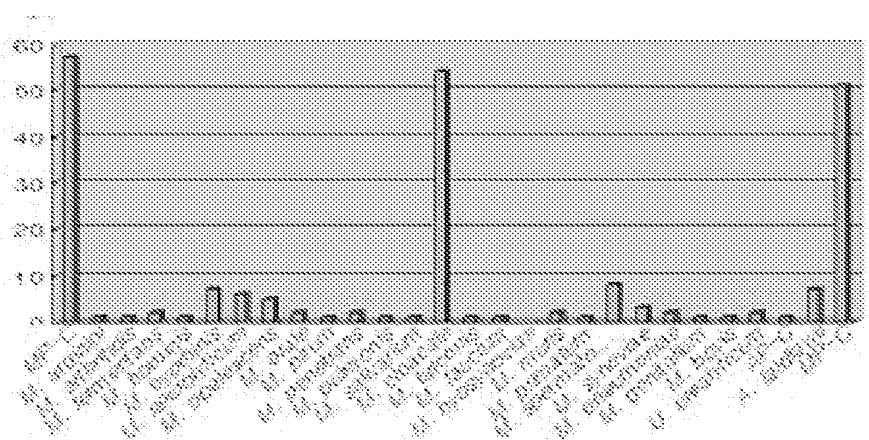
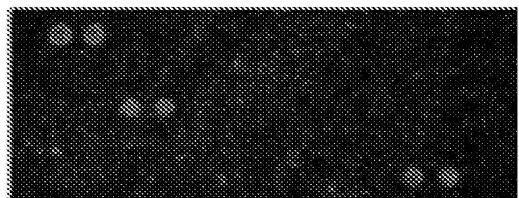


FIG. 5b

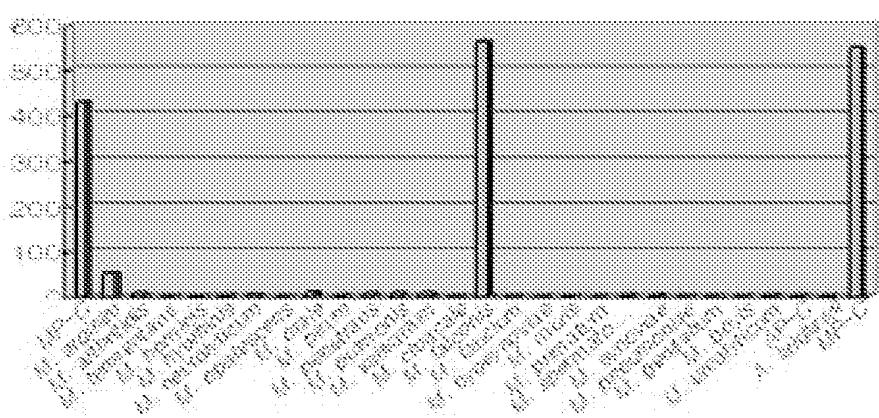
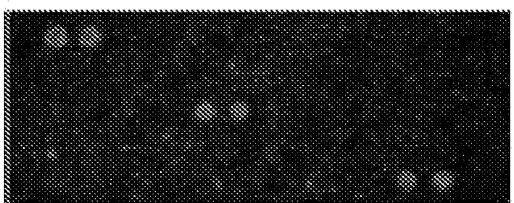


FIG. 5c

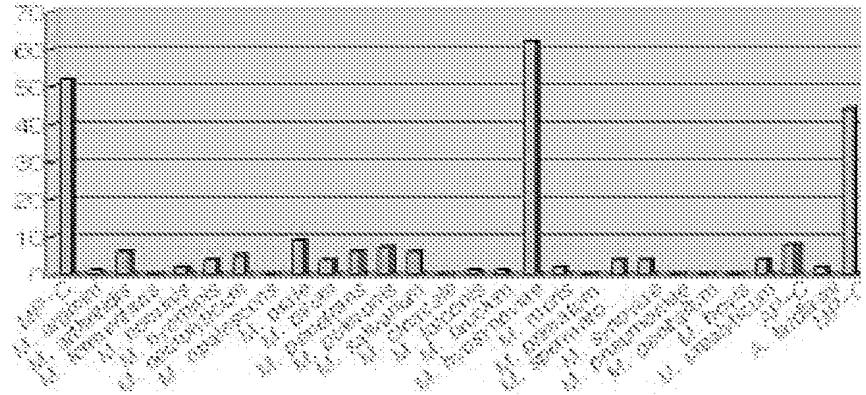
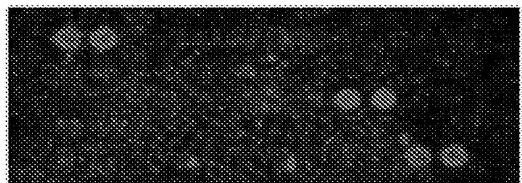


FIG. 5d

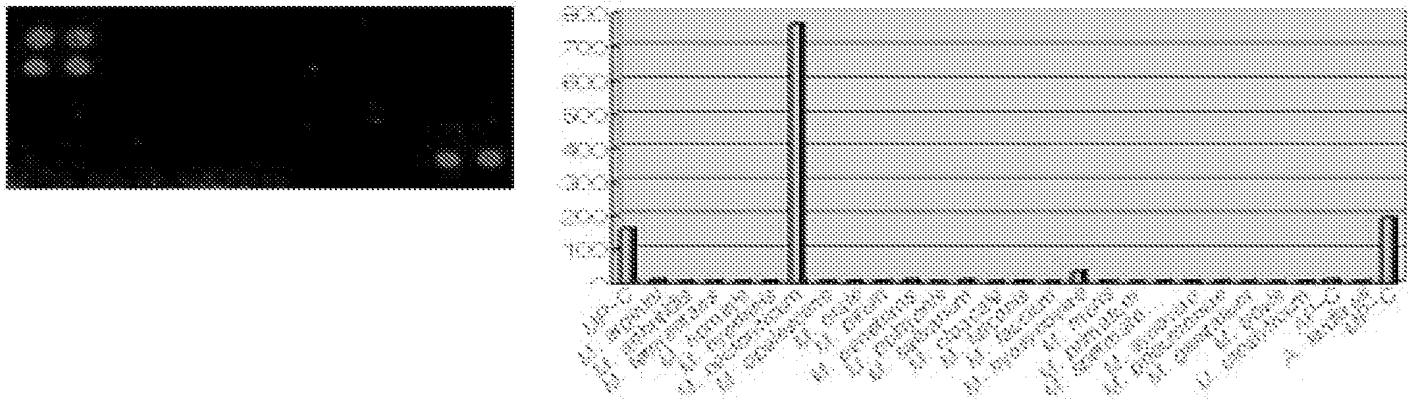


FIG. 5e

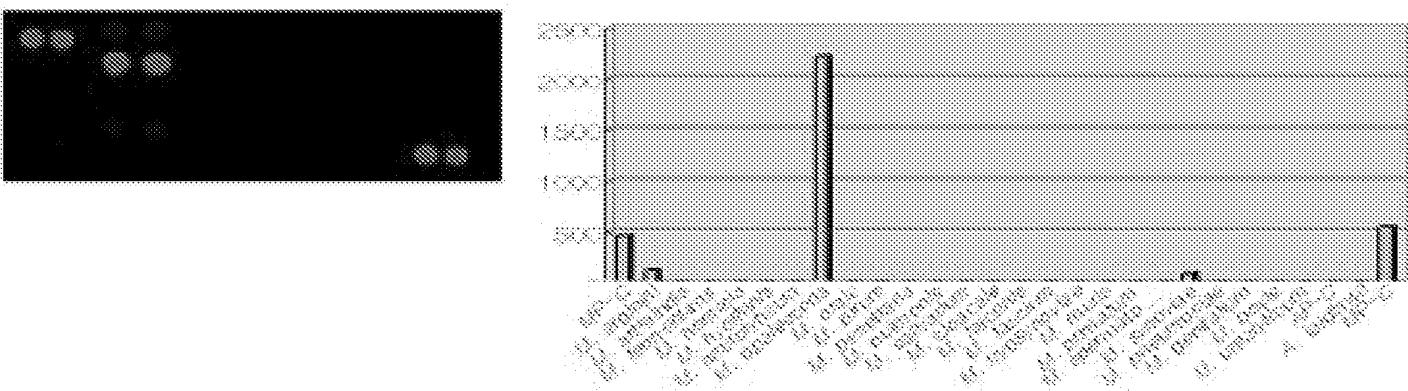


FIG. 5f

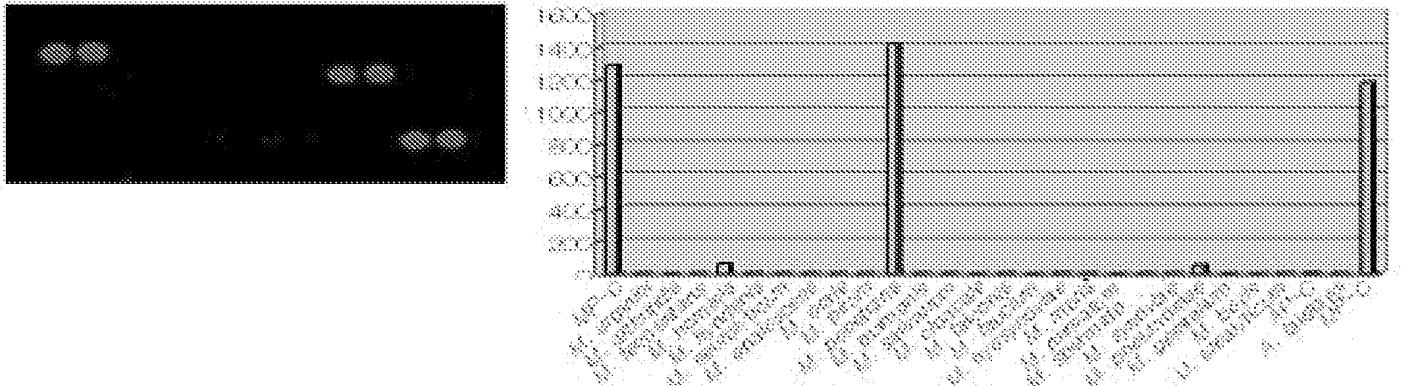


FIG. 5g

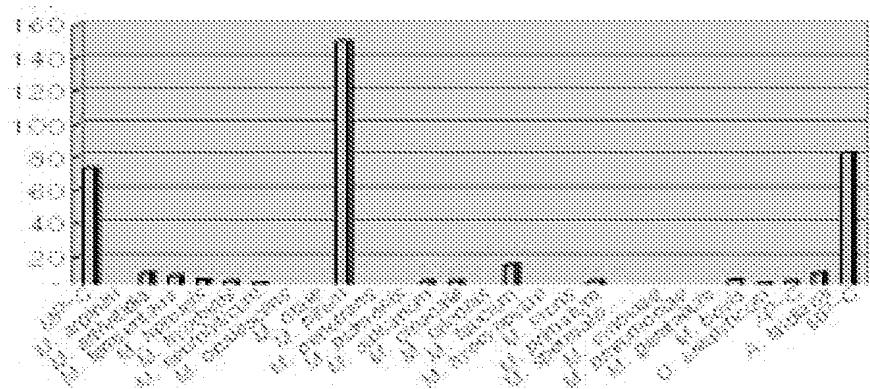
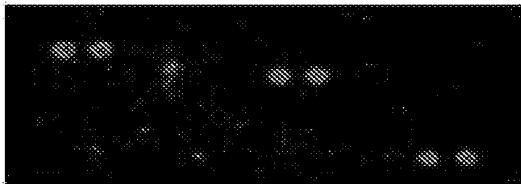


FIG. 5h

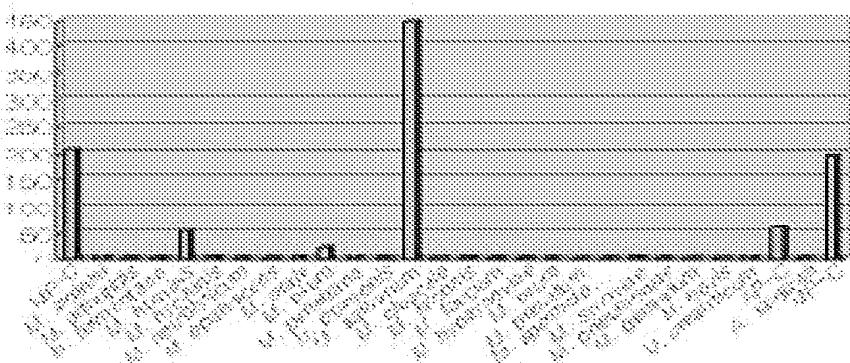
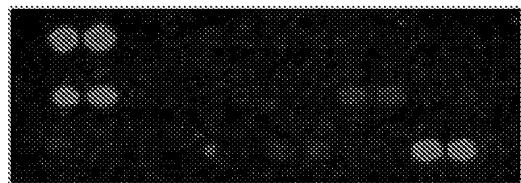


FIG. 5i

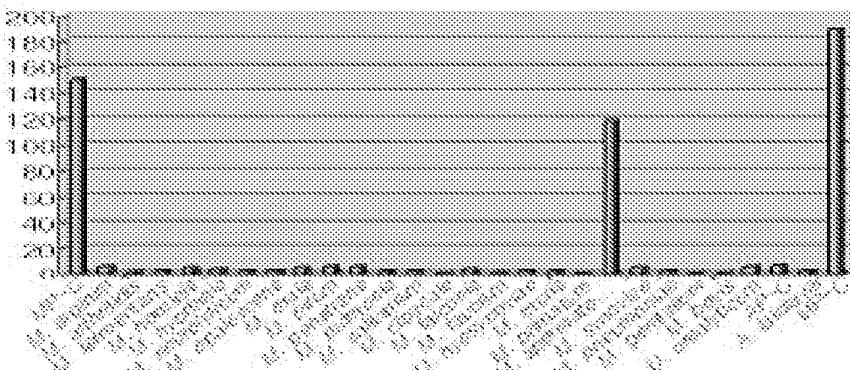
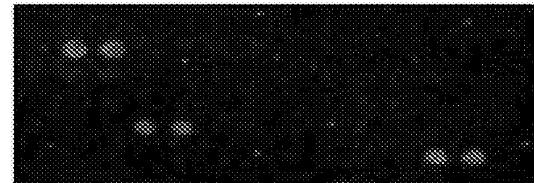


FIG. 5j

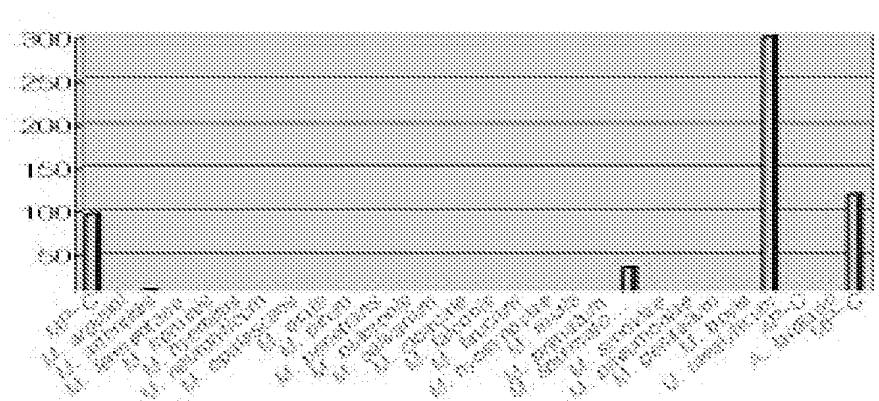
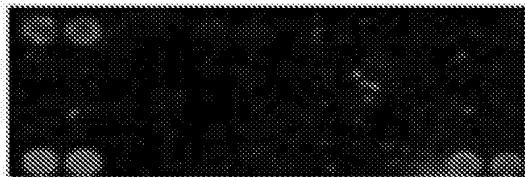


FIG. 5k

